

# collaborative

## working across the world

to deliver solutions for urgent water needs



KWR Watercycle Research Institute is one of the world's leading centers of excellence for innovation and expertise in water cycle management

**It provides support and guidance to central governments, municipalities and other public sector organizations responsible for drinking water supply and wastewater management by:**

- ▶ **Creating knowledge through top quality research**
- ▶ **Building bridges between science, business and society**
- ▶ **Promoting societal innovation by applying the best knowledge available.**

**Working collaboratively with Atos, KWR is bringing world class tools to water experts around the world.**

Water is the most basic and important of all human needs. Without access to adequate supplies of clean water life becomes impossible. Yet government bodies and water companies are facing greater challenges every year in delivering this most vital resource to the people who need it. To improve performance and deliver better, more reliable services, there is an urgent need for world class tools, know-how and hands-on experience to provide guidance and access to best practices.

KWR Watercycle Research Institute in the Netherlands, is recognized as a key player in water cycle research, with leading academic experts permanently on staff and 65 years of research to draw on.

Originally founded in 1948, KWR is owned by the ten Dutch water companies but is an independent body, working as adviser to governments, regional authorities and specialist water companies in many different countries. Now, thanks to an ongoing collaborative project with Atos, it is becoming easier than ever for client organizations to work with KWR in finding solutions for their water needs.

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# The power of collaboration

KWR has a clear vision when it comes to creating a membership-based, collaborative structure that allows effective collaboration with organizations in the international water sector. This concept is known as “Watershare®”, and its core principle is rather simple.

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Public organizations around the world that are engaged in water cycle research can become Watershare® members and gain access to KWR’s research tools. As the name suggests, however, this is intended to be a two-way relationship. In return for their membership fee (which reflects the three possible levels of membership: silver, gold and platinum), organizations can access research tools and consultancy services delivered by the academics working at KWR.

All members, however, are asked to give as well as take, contributing their own research to the central archive in return for lower membership fees and higher levels of consultancy access. In this way Watershare® is creating a unique collaborative community, bringing together leading academic researchers, government policy-makers and commercial organizations large and small within the same peer group.

The concept is both generous and visionary. The long-term goal is to make this a truly international community that is self-sustaining and self-funding, and which ensures that all those who need it can have access to the very best practice and most advanced knowledge.

It also reflects the current reality in water cycle research, which is that every municipality, regional or national government is facing large and complex challenges that are often continental or even global in nature, but the industry is fragmented, and no individual organization has the resources needed to solve such huge problems. We need to mobilize the best skills that the global industry can offer, and Watershare® provides perhaps the most effective mechanism yet devised for doing that.

## Building a global community

**To make Watershare® a reality, it is essential to give other knowledge institutes in the water sector more open access to key content. That’s where specialist help from Atos has proved essential.**

The Watershare® concept depends on the ability to access and share tools and core content under controlled conditions but with simplicity and speed. At first, however, this vision was a long way from reality. Content was stored in a wide variety of different formats, some as Word documents, others as spreadsheets, hard copy and specialized modeling software. Sharing this information was difficult, and there was no mechanism at all for this content to be shared with other experts.

Watershare® is not simply about exchanging information. It is also a way of accessing fully developed tools for problem-solving. By downloading and working with mature, best practice methodologies and related Watershare® tools, members know they have the ability to put true best practice into action in their own areas. These tools are fully-realized software solutions and require a sophisticated platform for access and remote delivery.

In order to establish the international community that KWR envisaged, a new approach was needed.

KWR Watercycle Research Institute has the ambitious goal of building up a large and growing portfolio of solution tools for the most important and widely-encountered water challenges. By taking this initiative, KWR acts as trustee for the intellectual property involved and focal point for accelerating development of world-class expertise more widely around the globe. Watershare® is now building up its toolkit, providing practical blueprints for action, supported by training, academic and practical business intervention and validated through references and use cases. The Watershare® tools are now being used with increasing frequency as a key access point for the practical skills needed to solve tough water-related issues.

## An ambitious vision

At this point Atos was invited to contribute to the development approach in July 2012, when a team led by Jan Krans, a collaboration expert in the Atos Netherlands consulting team, reviewed options with KWR and started to build detailed proposals. The concept of Watershare® KWR had in mind gave Atos the opportunity to define and develop a concept for improving collaborative working in the water industry.

One outcome of this approach has been a joint development approach, by which Atos and KWR continue to work together in taking Watershare® out to the wider market.

“Meeting the water sector’s challenges demands that stakeholders collaborate, that they work together to create the critical mass required to build the scientific expertise needed for the whole range of water cycle issues. The ultimate goal is naturally to develop practical solutions based on solid science. This has motivated KWR to take the Watershare® initiative: it’s all about sharing expertise.”

**Prof. Gertjan Medema, Chief Science Officer, KWR Watercycle Research Institute.**

The joint KWR – Atos team began work to take existing knowledge and best practice in a range of key water-related areas and turn these into interactive, programmed tools that can be used by experts in the international water sector. These tools are:

- ▶ Based on solid, proven scientific research, often commissioned originally by water companies, the EU or national governments
- ▶ Properly benchmarked and tested, so that they clearly represent best practice thinking and experience, giving users confidence in the quality and stability of the methods included within them
- ▶ Focused on known, practical problems that are likely to be encountered by most water providers, government bodies and regulators at some point
- ▶ Supported by detailed manuals, peer-reviewed research, training procedures, references and use cases
- ▶ Backed by expert consultancy, with the ability to meet online, question, ask for supplementary research and sharing of insights.

Watershare®, in other words, goes far beyond the exchange of research information and provides a practical toolkit that is ready for action at once, delivering measurable benefits to expert institutes and the end-users they serve.

## Atos making the difference

The Atos development team worked fast to build the tools that enable Watershare® members to access knowledge, exchange of research and insights, and hands-on practical support in their work.

In just 6 weeks' of intensive work, the Atos Team created the application architecture, technical infrastructure (code repository, test and production server, including MySQL Database and Tomcat application server) for 10 Watershare® tools. After this, the team carried out interviews with KWR experts and developed an analysis document for every tool, including a high level functional description and wire frames describing the screen layout.

Based on these documents, eight skilled Atos developers, a tester and project manager were assigned to build the tools that had been defined and validated through this process. Tools were tested in cooperation with KWR Experts and put into production a few days before Christmas 2012. This involved programming content so that users can input their own data, related to real-world conditions as experienced by them, enabling dynamic configuration of the tool, based on the input data.

In this way, each tool become more than a generalized form of guidance and can be used as a practical instrument for implementing best practice. Rather than translating content into terms that can be used within the users' own context, it is possible to turn the basic toolset into specific tools that are precisely suited to the needs of each user. By inputting real data, they are able to customized and configure for their own purposes, giving them a new and powerful way of addressing often highly specific needs.

In addition to the programmable tools, themselves, each information package includes research information, use cases and references, all restructured and presented in a fresh, consistent and compelling way to make it easier to access and use. The interactive capability of the collaboration site includes help requests, and the ability to schedule more indepth support as needed.

KWR Watercycle Research Institute has the ambitious goal of building up a large and growing portfolio of solution tools for the most important and widely-encountered water challenges. By taking this initiative, KWR acts as trustee for the intellectual property involved and focal point for accelerating development of world-class expertise more widely. Watershare® is now building up its toolkit, providing practical blueprints for action, supported by training, academic and practical business intervention and validated through references and use cases. The Watershare® tools are now being used with increasing frequency as a key access point for the practical skills needed to solve tough water-related issues.

The Watershare® toolkit is growing all the time. There are 20 specific tools now either available or in development for launch in early to mid-2014. They are related to six key strategic topics:

- ▶ Water quality & health, covering chlorine free supplies, managing bacteria and water supply risk evaluation
- ▶ Sustainability, addressing integrated urban water management and recycling water plant residuals
- ▶ Water technology, focused on membranes and naturally occurring organic matter
- ▶ Asset design & management, covering such diverse topics as self-cleaning networks, lead reduction, valve management, cost-effective replacement of existing pipes and understanding water usage
- ▶ Water systems, dealing with groundwater dynamics, stress in soil moisture, vegetation as a way of measuring water availability, groundwater extraction risks, salinization of fresh water, groundwater well status
- ▶ Management, looking into future assessments. Taken together, this initial set of tools provides a vital intellectual resource for water cycle knowledge institutes worldwide. The first non-KWR tool is now under development and it is expected that many others, contributed by Watershare® members, will follow.

## Delivering the results

The Watershare® project is a remarkable example of strong and successful collaborative working in practice. The original parameters set by KWR were extremely challenging but Atos was able to meet them all. As planned, the Watershare® collaboration site went live with the first batch of 10 tools at the end of 2012 and uptake has been ahead of expectations.

The concept of silver, gold and platinum membership enables users in Europe and abroad to select the level of commitment that suits their own requirements and feedback has been extremely positive. With the first member developed tool now scheduled for launch in 2014, it seems likely that others will follow in the months and years ahead. The benefits are already starting to appear, therefore, for everyone involved.

- ▶ KWR Watercycle Research Institute has now taken an even stronger lead in global knowledge-sharing and has also started to secure future research funding through fee income from the membership scheme
- ▶ Atos has developed a powerful, repeatable collaboration solution with great potential for onward use in other industries and countries
- ▶ Watershare® members are able to access best practice knowledge and practical tools in a way that would have been virtually impossible in the past, for the benefit of all their peoples.

In a world where collaborative working will be more and more important for well-being and prosperity of an inter-connected global economy, Watershare® is a key example of how collaboration really delivers benefits for everyone involved.

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## About Atos

Atos SE (Societas Europaea) is an international information technology services company with annual 2012 revenue of EUR 8.8 billion and 76,400 employees in 47 countries. Serving a global client base, it delivers Hi-Tech Transactional Services, Consulting & Technology Services, Systems Integration and Managed Services. With its deep technology expertise and industry knowledge, it works with clients across the following market sectors: Manufacturing, Retail & Services; Public sector, Healthcare & Transports; Financial Services; Telecoms, Media & Technology; Energy & Utilities.

Atos is focused on business technology that powers progress and helps organizations to create their firm of the future. It is the Worldwide Information Technology Partner for the Olympic and Paralympic Games and is quoted on the NYSE Euronext Paris market. Atos operates under the brands Atos, Atos Consulting & Technology Services, Atos Worldline and Atos Worldgrid.

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